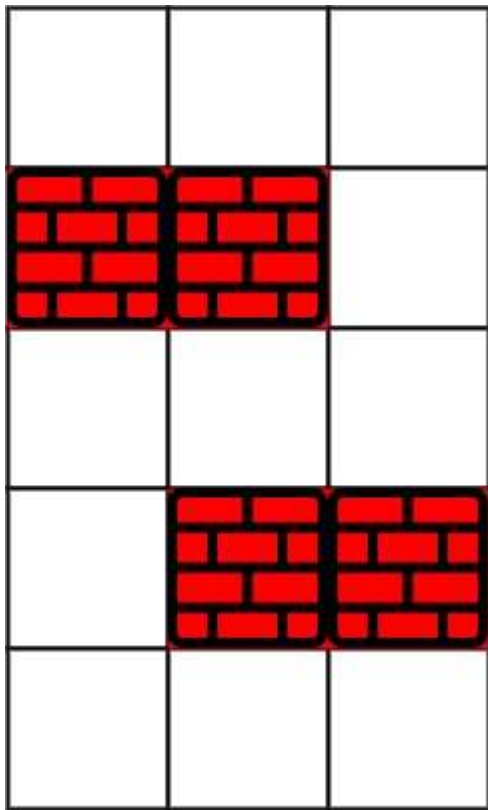


Shortest Path in a Grid with Obstacles Elimination [\(View\)](#)

You are given an $m \times n$ integer matrix `grid` where each cell is either 0 (empty) or 1 (obstacle). You can move up, down, left, or right from and to an empty cell in **one step**.

Return the minimum number of **steps** to walk from the upper left corner $(0, 0)$ to the lower right corner $(m - 1, n - 1)$ given that you can eliminate **at most** k obstacles. If it is not possible to find such walk return -1 .

Example 1:



Input: `grid = [[0,0,0],[1,1,0],[0,0,0],[0,1,1],[0,0,0]]`, `k = 1`

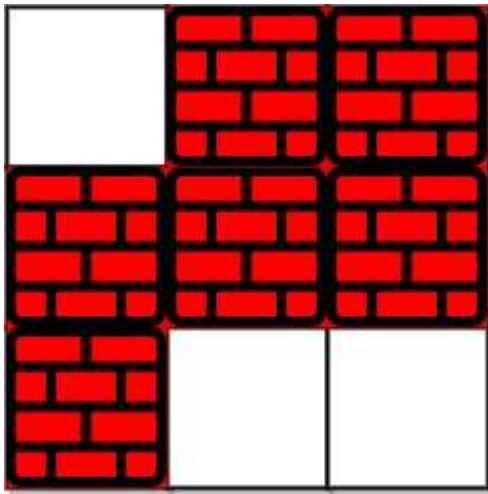
Output: 6

Explanation:

The shortest path without eliminating any obstacle is 10.

The shortest path with one obstacle elimination at position (3,2) is 6. Such path is $(0,0) \rightarrow (0,1) \rightarrow (0,2) \rightarrow (1,2) \rightarrow (2,2) \rightarrow (3,2) \rightarrow (4,2)$.

Example 2:



Input: `grid = [[0,1,1],[1,1,1],[1,0,0]]`, `k = 1`

Output: `-1`

Explanation: We need to eliminate at least two obstacles to find such a walk.

Constraints:

- `m == grid.length`
- `n == grid[i].length`
- `1 <= m, n <= 40`
- `1 <= k <= m * n`
- `grid[i][j]` is either 0 or 1.
- `grid[0][0] == grid[m - 1][n - 1] == 0`